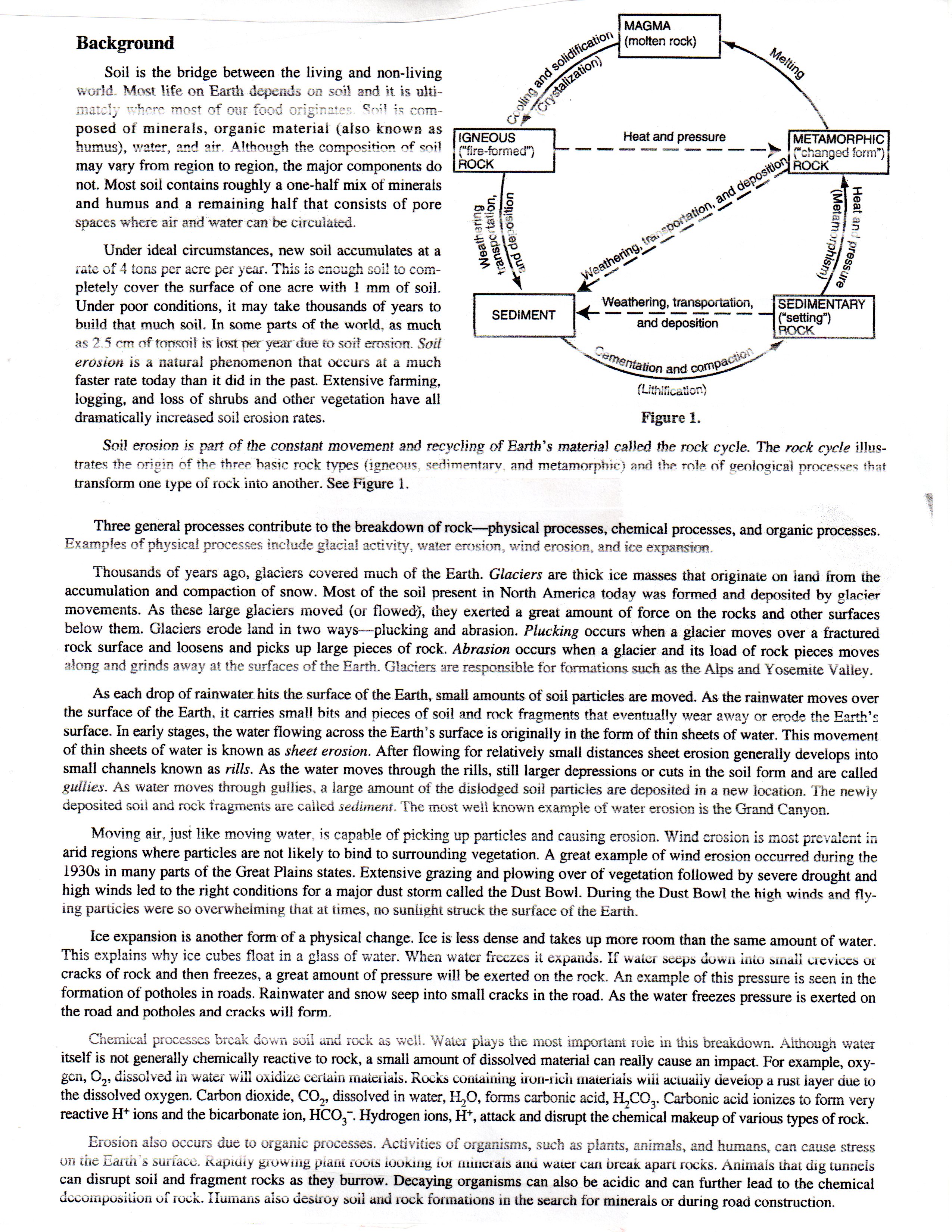
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**Part 1 – Water Erosion**

1. Place a thin layer of sand in a shallow pan.
2. Obtain a Beral pipet filled with water. Place drops of water on top of the sand – one drop at a time. Each drop of water represents a drop of rainwater. Record observations.
3. Refill the pipet with water. This time, squeeze the water out of the pipet all at once on top of the sand. This will represent a rill. Record all observations.
4. Obtain a 250 beaker of water. Pour all of the water from this container on top of the sand at once. This will represent a gully. Record all observations.
5. Dispose of sand/water mixture as directed by your teacher.
6. Answer questions to Part 1.

**Part 2 – Geological Changes**

1. Obtain two rock samples and a white sheet of paper
2. Simulate geological changes on a miniature scale by rubbing two rocks together over the white sheet of paper. Record all observations.
3. Answer questions to Part 2.

**Part 3 – Glacial Changes**

1. Obtain an ice cube, sand, a paper towel, and a Styrofoam tray.
2. Sprinkle a small amount of sand onto the Styrofoam tray.
3. Using a paper towel, hold onto the ice cube.
4. Slowly move the ice cube over the sane while pushing the ice cube down on the Styrofoam tray. The weight being placed on the ice cube simulates the many feet of ice and snow in a glacier.
5. After the ice cube has been moved over the surface of the Styrofoam try, lift it up and record all observations.
6. Gently wipe the sand off the Styrofoam tray. Describe the surface of the Styrofoam tray in your observations.
7. Answer questions to Part 3.

**Part 4 – Chemical Processes**

1. Obtain a homemade rock.
2. Use a magnifying glass to observe the hardened homemade rock. Record all observations.
3. Break the rock into two pieces and leave one piece in the aluminum dish. Place the other half of the homemade rock in another aluminum dish.
4. Add five drops of water to one-half of the homemade rock. Observe what happens to the tock. Record all observations.
5. Add five drops of vinegar to the other half of the homemade rock. Observe what happens to the rock. Record all observations.
6. Answer the questions to Part 4.

**Post Lab Questions**

*Part 1 – Water Erosion*

1. How did the ‘raindrops’ simulation affect the soil sample?
2. How did the ‘rill’ simulation affect the soil sample?
3. How did the ‘gully’ simulation affect the soil sample?

*Part 2 – Geological changes*

1. What happened to the two rocks as they were rubbed together?
2. What could this possibly be simulating?

*Part 3 – Glacial Changes*

1. What happened to the surface of the ice cube?
2. Describe what happened to the surface of the Styrofoam tray.
3. Predict what would happen is a glacier moved across the surface of land.

*Part 4 – Chemical Processes*

1. What happened when water was placed on the homemade rock?
2. What happened when vinegar was place on the homemade rock?
3. Vinegar is an acidic solution. Using what was learned in this procedure, what effect do you think acid rain has on rocks?

*Part 5 – Ice Expansion*

1. Explain what happened to the glass vial.
2. Give an everyday example of ice expansion.

*Part 6 – Expansion and Contraction Effects*

1. Judging from the heating and rapid cooling of the glass vial in this procedure, what do you think happens to rocks as they are heated and cooled?

*Part 7 – Organic Processes*

1. How did the growing tree in the picture affect the rock in the picture?



1. Name two everyday examples of ‘organic’ soil disruption (other than the one in the picture.)